



DISTRIBUTOR:  
CINCINNATI - MILACRON  
WALMET CARBIDE  
MULTI-METALS

LEVI FRICK  
SALES ENGINEER

630-5995  
AREA CODE 213

CEL-STAR INC.  
7516 MADISON ST.  
PARAMOUNT, CA. 90723

**DPN 5739**  
**SEMISYNTHETIC  
METALWORKING FLUID FOR  
MODERATE-DUTY  
MACHINING AND GRINDING  
APPLICATIONS**

# **CIMCOOL® QUAL STAR**

**(Tested as CX1002)**

**“A NEW-GENERATION  
SEMISYNTHETIC”**

## **DESCRIPTION**

As a new-generation semisynthetic fluid, CIMCOOL QUAL STAR metalworking fluid uniquely blends the technological advantages of modern day synthetics with the performance capabilities of soluble oils.

CIMCOOL QUAL STAR metalworking fluid is a clean, completely water-soluble, *nonnitrite, non-phenolic, nonsilicone*, semisynthetic product, having exceptional corrosion and rancidity control. CIMCOOL QUAL STAR metalworking fluid has a broad concentration range, 1:10 (10%) 1:25 (4.0%), which gives it the flexibility to fit many operations in the plant.

CIMCOOL QUAL STAR metalworking fluid is exceptionally mild, which makes it an ideal product for individual machine applications where mixes tend to concentrate. CIMCOOL QUAL STAR metalworking fluid can also be used in central system applications.

CIMCOOL QUAL STAR metalworking fluid's flexibility and broad operating range complements the new era of flexible manufacturing technology.

Easy to maintain and control. CIMCOOL QUAL STAR metalworking fluid can be recycled for reuse by the CIMCOOL Full Cycle™ Module, or can easily be treated for disposal.

## **APPLICATION**

Recommended for general-purpose machining and grinding of ferrous metals including carbon/cast steel, cast/nodular/malleable/gray iron, stainless steel, and high alloy steels. Can also be used on some light- to moderate-duty applications on nonferrous metals.

**CINCINNATI  
MILACRON**

# FEATURES AND BENEFITS

## EXCELLENT FERROUS CORROSION CONTROL

- Rust inhibitor package is extremely effective in preventing in-process rust on machines and parts.
- Very effective on cast/malleable/gray/nodular iron.
- Contains nonferrous corrosion inhibitors which prevent stain on aluminum alloys, brass, copper, and bronze.

## SUPERIOR RANCIDITY CONTROL

- Effective protection against bacteria and mold.
- No "Monday Morning" odors. This ensures long fluid life, minimizes the use of additives, and increases operator satisfaction.

## MULTI-PURPOSE PRODUCT

- CIMCOOL QUAL STAR metalworking fluid can be used economically throughout the shop on light-, moderate-, and some heavy-duty operations; just vary the dilution to suit the job requirements.
- Liquid residue—keeps machine tool components free-moving regardless of equipment age.
- Excellent choice for individual machine applications.

## EFFECTIVE LUBRICATION AND COOLING QUALITIES

- Physical and chemical lubricants provide good machining and grinding properties; keeps parts and tools cool.

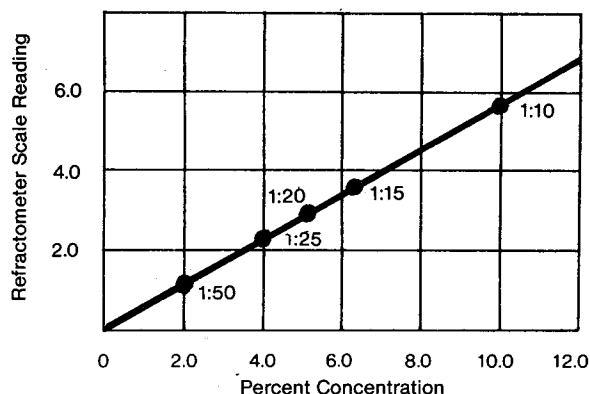
## PLEASANT TO USE

- No smoke; no slippery film on parts, machines or floors; low misting; mild to the skin when used as recommended; no ammonia odors.

## NITRITE-FREE. PHENOL-FREE. SILICONE-FREE.

Ask your local Cincinnati Milacron Distributor for a trial today.

Concentration Check For  
CIMCOOL QUAL STAR  
Metalworking Fluid



## CONCENTRATION

By using the American Optical Refractometer Fluid Tester, Model 10440, or the Atago Refractometer, Model SPR-N (refer to Conversion Chart at left).



# CIMCOOL QUAL STAR

## RECOMMENDED STARTING DILUTIONS

Use at 1:10 (10.0%) to 1:25 (4.0%) for machining and grinding of ferrous and some non-ferrous metals in central system and individual machine applications.

CIMCOOL QUAL STAR metalworking fluid is to be mixed with water for use (add concentrate to water). Add no other substances to the concentrate or mix unless approved by Cimcool Technical Services (1-800-On 2 time, or in Ohio 1-800-582-7522).

## RECOMMENDED CIMCOOL MIX MASTER PROPORTIONER TIP SIZES

Dilution	1:10 (10.0%)	1:20 (5.0%)	1:25 (4.0%)	1:30 (3.3%)
Tip Size	43	48	51	53

After installation of the tip, titrate the mix to be sure the concentration is correct. Leaner dilutions may be needed for makeup.

For concentration analysis, use the CIMCOOL "Mini" Kit I, Mixed Indicator (MI) Titration Procedure, or a refractometer.

## TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

Physical state.....	liquid
Appearance and odor.....	clear; chemical
Colors available.....	pink, undyed
Solubility in water.....	100%
Weight, lb/gal, 60°F (15.6°C).....	8.28
Specific gravity (H <sub>2</sub> O = 1).....	0.993
Boiling point, °F (°C).....	212 (100)
Flash point, COC, °F (°C).....	none; self-extinguishing
Fire point, COC, °F (°C).....	none; self-extinguishing
Extinguishing media.....	no fire hazard
Unusual fire & explosion hazards.....	none
Freezing point (or pour point), °F (°C).....	22 (-5.6)
Protect from freezing.....	
pH, concentrate.....	9.5
pH, 1:25 (4.0%) mix, typical operating conditions.....	9.1
Total chlorine/chloride, wt %, calculated.....	0.143/less than 0.005
Total sulfur, wt %, calculated.....	0.36
Diethanolnitrosamine, mercurials, phenols, PCB's, nitrites, silicones, phosphates, PTBBA.....	none

## PACKAGING

Available in 5-gallon pails, 55-gallon drums, Liqua Bins, and in tank truck quantities.

Do not reuse container before cleaning. After cleaning, remove label and relabel appropriately.

## DOT LABELING REQUIREMENTS

Hazardous Materials Description and Proper Shipping Name (49 CFR 172.101):	Hazard Class (49 CFR 172.101):
Not a hazardous material	Not applicable

# Product Safety Data

CIMCOOL QUAL STAR

## HEALTH HAZARD DATA

*Not for internal consumption.*

### Emergency and First Aid Procedures:

- Skin — Avoid prolonged contact with concentrate. Flush with water.  
Eyes — In case of contact with concentrate, flush with running water for 15 minutes. Call a physician.  
Ingestion — If concentrate is swallowed, do not induce vomiting. Dilute with water or milk. Call a physician.  
Inhalation — No first aid required; concentrate not volatile.

The following toxicity tests were conducted in accordance with the techniques specified in the Regulations for the Enforcement of the Federal Hazardous Substances Act (16 CFR 1500.3, revised 1982).

- Acute Oral Toxicity (LD<sub>50</sub>—Rats) — Above 5 g/kg (undiluted).  
Acute Inhalation Toxicity (LC<sub>50</sub>—Rats) — Data Pending.  
Acute Eye Irritation (Rabbits) — Positive (undiluted); negative for a 10% mix—no irritative or corrosive effects.  
Primary Skin Irritation (Rabbits) — Positive (undiluted); negative for a 10% mix—noncorrosive and not a primary skin irritant.  
Acute Dermal Toxicity (LD<sub>50</sub>—Rabbits) — Above 2 g/kg (undiluted).

### Additional Testing:

- Bacterial Mutagenic (Ames) Test — Data Pending.

## REACTIVITY DATA

- Stability — Stable.  
Hazardous polymerization — Will not occur.  
Incompatibility (materials to avoid) — Avoid contact of concentrate with strong acids.  
What volatile products are given off if subjected to open flame or abnormally high temperatures — Water vapor, carbon dioxide, and organic vapors.

## SPILL OR LEAK PROCEDURES

- Steps to be taken if material is released or spilled — Flush with water.  
Recommended disposal method(s) — Ultrafiltration, or acid-alum-polymer chemical treatment, or high temperature incineration.

## SPECIAL PROTECTION INFORMATION

- Respiratory Protection — None required.  
Ventilation — No special requirements.  
Protective Gloves — Not required.  
Eye Protection — Safety goggles recommended when handling concentrate.  
Other Protective Equipment — Normal metalworking plant protective equipment.

## SPECIAL PRECAUTIONS

- Handling and Storage — None required.  
Precautionary Labeling — See product label. Product labels for use in shop available to bulk users.

Minor formulation changes or normal variations in the manufacture of this product may cause slight variances in the data presented on this sheet.